

DETAILED ACTION

Allowable Subject Matter

1. Claims 1, 3, 5-7, 10, 12-20 and 51-54 are allowed.
2. The following is an examiner's statement of reasons for allowance: the prior art does not disclose or make obvious the device of claims 1, 7 or 51, including a spin polarizing part consisting of a ferromagnetic layer and an injection part consisting of a nonmagnetic layer, an SyAF having a first magnetic layer and second magnetic layer having different magnitudes of magnetization and magnetically coupled together antiparallel to each other via a nonmagnetic layer, wherein magnetization of said first and second magnetic layers is reversed while maintained in an antiparallel state without applying an external magnetic field, and wherein said flowing electric current is 1mA or less. The prior art also does not make obvious the device of claims 15 or 17, including a spin polarization part including a ferromagnetic fixed layer and an injection part of a nonmagnetic layer, said nonmagnetic layer formed in contact with said ferromagnetic fixed layer, and wherein the magnetization of said ferromagnetic free layer is reversed by flowing electric current between the spin polarization part and said nonmagnetic layer (as claimed in claim 15) or said second ferromagnetic fixed layer (as claimed in claim 17) provided on the surface of said ferromagnetic free layer in the direction perpendicular to the film surface without applying an external magnetic field, and wherein said flowing electric current is 1mA or less.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN C. INGHAM whose telephone number is (571)272-8793. The examiner can normally be reached on M-F, 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Wael M Fahmy/
Supervisory Patent Examiner, Art Unit 2814

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/J. C. I./
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